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10/527,310	11/28/2005	Karin Hamsen	10191/3707	9585

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/527,310
Filing Date: November 28, 2005
Appellant(s): HAMSEN ET AL.

Gerard Messina
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 06/09/2008 appealing from the Office action mailed 08/29/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6160309	Le	12-2000
6274823	Khandros	08-2001
2002/0011661	Terasaki	01-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 8, 11, 12,13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le (US 6,160,309) in view of Terasaki (US 2002/0011661).

3. Regarding claim 8.

4. Le teaches a diode structure. Said structure comprises a diode (210). A press fit base (202) including an axially extending mounting region to mount a semiconductor chip (210). A head wire (204) provided with a head (205) configured to be affixed to the semiconductor chip. A stabilization arrangement, which includes at least a sleeve and an encapsulating material (206) filling cavities. Wherein the head wire together with the sleeve and the press fit base (202) forms a housing the cavities of which being filled with encapsulating material (206).

5. Le does not teach a stepped head.

6. Terasaki teaches press fit base having a head wire that includes a step (6c).

7. It would have been obvious to one of ordinary skill in the art to form a step in the head wire in order increase the stability of the connection and to prevent failure of insulating member.

8. Regarding claim 11.

9. Le teaches that the encapsulant (206) comprises epoxy (column 6 lines 5-15).

10. Regarding claim 12.

11. Le teaches that only the head of the head wire which is inside the housing is surrounded by encapsulating material (fig 2).

12. Regarding claim 13.

13. Le teaches that only the head of the head wire includes at least two regions having different diameters (fig 2).

14. Regarding claim 14.

15. Le teaches that the head wire is cone shaped (fig 2).

16. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le (US 6,160,309) in view of Terasaki (US 2002/0011661) as applied to claim 8 and further in view of Khandros (US 6,274,823).

17. Regarding claim 9.

18. Le in view of Terasaki teaches elements of the claimed invention above.

19. Le further teaches that the head wire is composed of copper (column 3 lines 15-25).

20. Le in view of Terasaki does not teach the lead wire is coated with nickel phosphorous alloy.

21. Khandros teaches coating a copper lead wire with nickel phosphorous alloy (column 6 line 60-column 7 line 5).

22. It would have been obvious to one of ordinary skill inn the art to coat the copper wire with nickel phosphorous alloy in order to increase the yield strength and resiliency of the wire.

23. Regarding claim 10.

24. Le in view of Terasaki teaches elements of the claimed invention above.

25. Le further teaches that the head wire is composed of copper (column 3 lines 15-25).

26. Le in view of Terasaki does not teach the lead wire is coated with nickel phosphorous alloy.

27. Khandros teaches coating a copper lead wire with nickel phosphorous alloy (column 6 line 60-column 7 line 5).

28. It would have been obvious to one of ordinary skill inn the art to coat the copper wire with nickel phosphorous alloy in order to increase the yield strength and resiliency of the wire.

29. Claims 16, 17, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le (US 6,160,309) in view of Terasaki (US 2002/0011661) in view of Khandros (US 6,274,823).

30. Regarding claim 16.

31. Le teaches a diode structure. Said structure comprises a diode (210). A press fit base (202) including an axially extending mounting region to mount a semiconductor

chip (210). A head wire (204) provided with a head (205) configured to be affixed to the semiconductor chip. A stabilization arrangement, which includes at least a sleeve and an encapsulating material (206) filling cavities. Wherein the head wire together with the sleeve and the press fit base (202) forms a housing the cavities of which being filled with encapsulating material (206). Le teaches that the encapsulant (206) comprises epoxy (column 6 lines 5-15). Le further teaches that the head wire is composed of copper (column 3 lines 15-25).

32. Le does not teach a stepped head.

33. Terasaki teaches press fit base having a head wire that includes a step (6c).

34. It would have been obvious to one of ordinary skill in the art to form a step in the head wire in order increase the stability of the connection and to prevent fall of insulating member.

35. Le in view of Terasaki does not teach having a surface of the wire comprise nickel.

36. Khandros teaches coating a copper lead wire with nickel phosphorous alloy (column 6 line 60-column 7 line 5).

37. It would have been obvious to one of ordinary skill inn the art to coat the copper wire with nickel phosphorous alloy in order to increase the yield strength and resiliency of the wire.

38. Regarding claim 17.

39. Khandros teaches coating a copper lead wire with nickel phosphorous alloy (column 6 line 60-column 7 line 5).

40. It would have been obvious to one of ordinary skill inn the art to coat the copper wire with nickel phosphorous alloy in order to increase the yield strength and resiliency of the wire.

41. Regarding claim 18.

42. Le teaches that only the head of the wire which is inside the housing is surrounded by encapsulating material (206) and wherein the head includes two regions having different diameters (fig 2).

43. Regarding claim 19.

44. Le teaches that the head wire is cone shaped (fig 2).

(10) Response to Argument

45. The appellant argues that the Le reference does not disclose or suggest a stepped wire connection which together with the sleeve and press fit base form a housing (page 13).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Further, Le teaches a housing as defined by the wire connection (204, 205) and the press fit sleeve (202) comprising a cavity which is filled with encapsulant (202) surrounding the head of the connector (205) (fig 2).

46. The appellant argues that the Terasaki reference does not disclose or suggest a stepped wire connection which together with the sleeve and press fit base form a housing (page 13).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

47. The appellant argues that the references do not concern a diode designed for stability in a motor vehicle (page 13).

48. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a diode used in a motor vehicle.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

49. The limitation must distinguish from the prior art in terms of structure rather than function, *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997); See also *In re Swinehart*, 439 F.2d210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971). Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F. 2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a device does."

Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F. 2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

50. In response to applicant's argument that the prior art diode is not used in a vehicle, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

51. The appellant argues that the prior art does not refute the benefits provided by the claimed invention (page 13).

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

52. The appellant argues that there is no motivation to combine the references (page 13).

53. The motivation for form a step adjacent to the head of the connector is to increase the stability of the connection. This motivation is derived from the teaching of Terasaki wherein it is made clear that a step (6c) formed at the head of a connector of a diode will improve the stability of the connection (paragraphs 0070-0071).

54. The appellant argues that the prior art applied do not refer or operate in the same contact of the problem addressed by the invention (page 13).

In response to applicant's argument that the prior art applied is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the field of endeavor is diodes which the Le and Terasaki references clearly regard. The field of endeavor is not motor vehicles as the appellant contends.

55. The appellant argues that the examiner relied upon hindsight for the determination of obviousness (page 17).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

56. The appellant argues there is no suggestion or motivation to combine the prior art references.

57. The motivation for form a step adjacent to the head of the connector is to increase the stability of the connection. This motivation is derived from the teaching of

Terasaki wherein it is made clear that a step (6c) formed at the head of a connector of a diode will improve the stability of the connection (paragraphs 0070-0071).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Conferees:

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